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A Case of Excision of the Elbow-Joint. By J. Pancoast, M. D., Professor of Anatomy in Jefferson Medical College, &c.

Augustus Heyl, of Mount Holly, N. J., æt. 32, was thrown from his wagon in the summer of 1841, and received the force of the fall upon his right arm. A dislocation of the elbow-joint, backwards and upwards, was the consequence, attended, as he believes, with fracture of one of the bones. Reduction was made of the bone without difficulty, by an intelligent physician in the neighbourhood, and the patient in a few days resumed his occupation of distributing bread about the country, without any other protection to his arm than a sling. As the result of the imprudence, intense swelling and inflammation set up in the joint, followed by abscess, which discharged externally through several sinuses on the back part of the joint. Through these openings a discharge of matter was nearly constant, and a probe passed in traversed the cavity of the articulation, and grated against the carious extremities of the ulna and humerus.

From time to time, as the fistulous orifices closed, successive attacks of inflammation came on, ending in the formation of a fresh abscess, attended with great constitutional irritation, and in two instances with emprosthotonos. There was great swelling and thickening of the whole elbow, and the integuments at the posterior part of the joint were of a violet colour. The arm above shrunk to about half the size of its fellow of the opposite side. The joint became rigid with the forearm in the extended position. The radius was forcibly pronated and immoveable. To relieve the agony which he constantly suffered, the patient was in the habit of taking large quantities of laudanum. He became nervous and irritable; and though successively under the charge of various practitioners, here and elsewhere, he found little relief, as he was disinclined to follow out any course of treatment proposed. Finding his constitution giving way, he came to the city for the purpose of having his arm amputated, and placed himself under my care.

From the age of the patient, (his constitution being naturally good,) I determined to try to save the limb, which was the right, by excision of the elbow-joint; by which means I hoped at all events to get rid of the diseased bone, to be able to place his arm in the flexed position, so that it might be more useful to raise the forearm from its prone position, and possibly re-establish motion at the joint.

His journey to town, and subsequent walking about with his arm on a pillow, led to a new attack of inflammation, with great constitutional disturbance. The swelling, which was immense around the joint, extended up two-thirds the length of the arm, and was attended with a severe attack of pneumonia, which endangered his life. By appropriate treatment, and freely opening the abscess of the joint, he recovered. By June 14th his general con-

dition had so far improved, that I proceeded to the operation for excision, assisted by Drs. Peace, Davis, Bibighaus and others. The patient was laid on a bed with his face downwards; a tourniquet was applied on the arm, which was extended over the side of the bed, and held by an assistant. Another assistant supported the shoulder, and restrained the movements of the patient. The joint was exposed after the method of Moreau and Syme. I entered the bistoury perpendicularly, with its back nearly in contact with the ulnar nerve, and laid the joint widely open with a cross just above the end of the olecranon. Two longitudinal incisions were extended above, and two below from the ends of the cross cut, each an inch and a half in length, so that they formed the shape of the letter H. The flaps were dissected up and reflected. The periosteum was so loosened by suppuration, over the end of the humerus, that it stripped up without difficulty; but such an effusion of osseous matter had taken place in the substance of the flap, that the reflection was difficult; if let slip, it fell back with an elastic rebound. I next removed the olecranon with the amputation saw. The articular surfaces of the humerus and ulna were now found to be carious and softened; the synovial membrane of the joint, and the loose tissue of the greater sigmoid cavity in a state of pulpy fungus. To remove the articular surface of the humerus (the bone above this, though inflamed and softened, not appearing carious,) I applied Barton's saw just at the margin of the epicondyles, and divided the bone nearly through with a strong pair of cutting forceps; partly by splitting, and partly by cutting, the section was completed. The loosened end was seized with a pair of large tooth forceps, and removed with a few strokes of the knife. The head of the ulna, which was very soft, and filled with fatty matter, was removed in the same manner. The whole base of the coronoid process it was not necessary to take away. Its top, and its whole articular face, which was carious, was divided with the cutting bone forceps, and twisted off from the tendon of the brachialis anticus with the large tooth forceps. This was the most painful part of the operation. The head of the radius, on which the cartilage was softened, was cut off in like manner and removed. All the pulpy synovial and cellular tissue was carefully dissected away. With some effort at first the forearm could now readily be flexed. The thumb was placed in the middle position, between pronation and supination; but to enable me to do this, it was necessary first to divide with the knife the orbicular ligament of the radius. All the carious bone being now removed, the cavity was sponged clear of blood. Two small arteries were tied, and the flaps brought together with six sutures—two in the transverse, and four in the longitudinal incisions. The elbow was placed on a pillow slightly bent, so as to avoid straining the parts at the transverse incision; simple dressings were applied, and a patent elbow splint, well padded, and secured with a figure of 8 bandage, placed on the back part of the joint, so as to prevent all motion. The arm was secured to the pillow with a second roller, and laid on an inclined plane made with pillows. Eight or ten ounces of blood were lost during the operation. The patient was directed to take a quarter of a grain of morphia in an ounce of camphor water every three hours, and to keep the dressings of the elbow well soaked with a strong solution of lead water and laudanum.

June 15. The patient has passed an excellent night; better than he has done for many months. The arm perfectly free from pain. At my evening visit the same day, I found him with the symptoms of incipient pneumonia. Pain in the breast; frequent cough; subcrepitant rhonchus. Directed a

table-spoonful of the following mixture every hour and a half. R. Infus. Polyg. Seneg. ℥viij.; Oxy. Scill. ℥j.; Tr. Lob. Infl. ℥j.; and a mustard plaster to the chest.

The lotion to be continued to the arm as before, from which there had been a slight oozing of blood.

16. Has been slightly nauseated; expectorates freely; some fever; no pain in the arm; subcrepitant rhonchus rather less diminished; some pain still in the chest. Directed a purgative enema; a blister to the front of the chest.

Expectorant mixture to be continued.

17. Condition much improved. Blister has drawn well; says it gave him much more pain than the operation on the joint. Chest free from pain. No unpleasant feeling in the elbow-joint; slept well; expectorates freely; pulse soft and good. Weak chicken water for diet. Mixture to be continued at lengthened intervals, with a quarter of a grain of Sulph. Morphiæ at bed time.

18. Condition excellent. Cough almost entirely gone; some expectoration still; slept well; has a good appetite, and no fever or pain in the arm. To-day dressed the wound. On removing the bandage it was found no suppuration had taken place, nor was there the slightest redness or swelling in the flaps. At all the points of junction of the flaps, (which were not brought in consequence of their rigidity into apposition at the time of the operation, the free space at the transverse wound being full three-sixteenths of an inch in width,) some coagulated blood was found interposed level with the skin, and solid and firm in its character. This I carefully refrained from disturbing. The simple dressing and splint was applied as before, and the same local treatment of strong lead water and laudanum directed.

The expectorant mixture to be continued.

19. Condition excellent in every respect; says his arm has been less painful since the operation, than it has ever been since the reception of the injury. Patient is up and moving about the room, with his arm supported on a pillow.

Expect. mixture discontinued.

20. The day being mild and fair, the patient felt so well as to walk out, and met me, at the time of my visit, a square and a half from his residence. To-day dressed the arm again. There was still no suppuration, except at the points of the sutures; nor the least change of colour in the flaps. The outer black surface of the blood, which filled up the interstices of the linear wounds, had peeled off here and there in a thin coat, leaving below it a mass of grayish red fibrine, which was unquestionably the effused and undisturbed blood adherent to the margin of the flaps, and in the first state of organisation. The parts were merely wiped dry with a piece of soft lint, and the sutures divided with a pair of scissors, and the same dressing and treatment as before reapplied.

21. Patient has obstinately continued to walk about; has suffered no pain whatever in his arm, as the joint has as yet been kept in a state of perfect immobility. On removing the dressings a slight degree of suppuration was obvious along the track of the wounds, and much more abundant at the points of the sutures. The loosened sutures were now withdrawn. The parts sponged lightly with warm water, and the dressings reapplied the same in every respect as before. During the last three dressings the forearm had

been at each time a little more flexed, so that it was now in a middle position between that of extension and a right angle.

Simple dressings were applied.

23. To-day the two ligatures of the vessels were taken away; at the point at which they were withdrawn there was some purulent discharge. At every other part of the wound the union was nearly complete, and may be considered as having taken place by first intention. The limb was now brought nearly to a right angle. The patient was exhibited to-day at the Clinique of the Jefferson Medical College. He left against my wishes for his home, and was not seen by me again for a week; he was directed daily to make passive motion of the arm.

July 1. A fistulous orifice of small size exists at the place from which the ligatures were withdrawn. At every other part the union remains perfect, and the shape of the elbow presents very much the natural appearance. The movement of the joint, which has been always attended by more or less pain, has been imperfectly kept up; flexion and extension, pronation and supination, can, however, be made to a considerable extent; and there is no question, if daily made under the care of a surgeon, that a most useful joint may be formed. The patient was enjoined to keep up the motion. But he is so well satisfied with his limb in its present condition, as it is bent at a right angle, free from pain and useful, and his health good, that there is reason to fear he will not subject himself to further pain to improve the motion of the joint.

8. The patient again came to the city. The small fistulous orifice had closed. The thumb retained its upright position, though the movements of pronation and supination not having been properly kept up, were less full than on the last visit. The forearm, by a little effort, can be flexed and extended to nearly the usual extent. From this period I have not seen or heard of the patient; and the movements of the elbow, which he now possesses, must be of a kind proportioned to his perseverance in keeping up the passive and voluntary motion of the joint, which were enjoined upon him as strongly as possible, inasmuch as he seemed indifferent to the result.

Remarks.

In this case I departed from the usual method of after treatment. No poultices or warm applications were at any time made about the joint. The plan of Mr. Syme, to open the wound on the second day after the operation, to sponge out the clotted blood, and of course provoke abundant suppuration, I most carefully abstained from, as I was desirous of producing the union of so extensive a wound, in a constitution which had been so much impaired, as far as possible by first intention. By the perfect rest of the part, the length of the interval between the operation and the second dressing, and especially by the use of the lead water and laudanum mixture, this desired result was attained to a greater extent than I am aware has ever attended an operation of the sort. The composition of the mixture I employ is, Ex. Saturni, ℥ss.; Tr. Thebaicæ, ℥ij. to a pint and a half of water. I have found this so useful after great operations in checking pain, preventing inflammation, and disposing to union by first intention, and, as I am well assured, occasionally to the organisation of the fibrine of layers of effused blood, that I feel desirous of attracting to the practice the notice of the profession. Under its influence, I have had in one case the flap from the forehead, in rhinoplasty, to unite completely, by first intention, to the margins of the nostril.

In the present case the articular heads of the bones only were removed, and there was, therefore, necessarily, far less danger of having the vacillating unsteady fibro-ligamentous joint apt to follow where a large portion of the bones were removed, than a somewhat rigid but rectangular joint—a lesser evil of the two. In many cases reported, I am disposed to believe an unnecessary amount of bone has been removed; and, at least, by practising the operation at an earlier period than has been usually done, all the diseased synovial tissue, cartilage, and articular faces of the bones might be removed without the necessity, as in the above case, of going on the one hand above the epicondyles, or on the other, so low as to take away the place of insertion of the brachialis anticus on the root of the coronoid process and the ulna adjoining it; leaving, in consequence, a much better opportunity for the preservation of a useful limb.

Philadelphia, Sept. 15, 1842.

Cases of Foreign Bodies removed from the Ear and Esophagus.

By James Bolton, M. D.

(Communicated through Professor Dunglison.)

Foreign body in the ear seven years.—During the latter part of last January, I was called to examine a girl, about thirteen years old, who complained of pain and deafness, with occasionally annoying sounds in one ear. From the closest inquiry into the history of the case, I could learn nothing which gave the least explanation of these symptoms, except that, on reflection, her mother remembered being alarmed by the child coming to her, when she was abont six years old, and telling her that she had got a grain of coffee in her ear. Not having the aid of bright sunshine, I could not make a satisfactory examination, although I discovered a dark substance, which I supposed to be inspissated cerumen, lying apparently upon the tympanum. I therefore syringed the ear with warm water and castile soap. On throwing in about the third syringeful with some force, a black looking substance shot into the basin, which on examination proved beyond all doubt, to be half of a coffee grain. She has been ever since, entirely free from any unpleasant feeling in the ear, and has recovered her hearing.

It is stated in various Journals, that Carpenter has successfully employed cold water injection, for the removal of foreign bodies from the ear.

Foreign body in the Esophagus(?) seventeen years.—A highly intelligent young lady of this city, whose health has always been delicate, on rising in the morning about two years since, coughed slightly and hawked some hard substance into her mouth. On removing a small quantity of mucus, with which it was ejected, it was discovered to be a small green glass ear drop. Her mother recollected distinctly, that a pair of ear rings, with green glass drops, had been presented to her by a relative, seventeen years previously, and that shortly afterwards, she had complained of having swallowed one of them; but as she felt no inconvenience, no notice was taken of it. The intelligence and veracity of the lady are such, as place the facts as related beyond all doubt. The ear drop, too, is evidently a very old fashioned affair, such as is not now to be found in any jeweller's shop.

Richmond, Va., August, 1842.

BIBLIOGRAPHICAL NOTICES.

Animal Chemistry, or Organic Chemistry in its applications to Physiology and Pathology. By JUSTUS LIEBIG, M. D., &c. Professor of Chemistry in the University of Giessen, Edited from the author's manuscript by WILLIAM GREGORY, M. D., F. R. S. E., M. R. I. A. &c. New York: Wiley & Putnam, 1842. 8vo. pp. 856.

WE had an opportunity of anticipating in our 30th number, the publication of a considerable portion of this work, and gave a pretty full analysis of Professor LIEBIG's views of vital action in animals, and of his theory of animal heat, and of the cause of death in chronic disease. The present work is one of transcendant ability, and is evidently the result of years of patient and acute investigation, of deep and original thought, and of the most intimate acquaintance with the sciences the author has called to his aid in the arduous pursuit he has undertaken. If we cannot in every instance yield our cordial assent to the premises, yet, granting these, we are forced to admire the beautifully sustained chain of reasoning, pervading every page, and stated with all the clearness and precision of a mathematical demonstration. The work is eminently suggestive, and the paths which the genius of Dr. Liebig has indicated, will doubtless open up others, which resolving the difficult problems of vitality, will create a new physiology and a rational pathology.

We recognize in the ovum as well as in the seed of the plant, a certain force in a state of rest, which is the source of growth and of reproduction. The static equilibrium of this force is disturbed by impregnation, and by the presence of air and moisture, and its new dynamic condition is manifested by the production of a series of forms. The increase of the organic mass is determined by the passage of matter from a state of rest to one of motion—assimilation, or the process of formation and growth. By this means certain component parts of the nourishment taken become component parts of the mass, and by comparing its chemical constitution with that of the nourishment, we ascertain with certainty what component parts of the latter have been assimilated and what rejected. The animal organism demands for its support, in all circumstances, highly organized atoms. In vegetables the whole process of formation is due to external influences, but in the animal organism, developement is, to a great degree, independent of these influences, it possessing in itself the source of motion. Every atom in the animal economy is produced from a peculiar fluid, circulating through every portion of it. Ordinary experience informs us that there is a perpetual change of matter going on in the organism, a constant transformation of organized into unorganized structure, which losing its condition of vitality, must be renewed. Every manifestation of force, every motion, every thought,

every sensation is followed by a change of structure. All vital activity arises from the mutual action of the elements of the food and the oxygen of the air, and this is the source of the animal heat.* The only known ultimate cause of vital force is a chemical process. If this be impeded or fail, the manifestation of the phenomena of life ceases. In the animal organism motion invariably proceeds from the nervous apparatus; we call, therefore, the production of force, the dynamic phenomena in the animal body, *nervous life*, and the resistance, the condition of static equilibrium, *vegetative life*. The passage of matter from a state of motion to a state of rest appears in an increase of the mass, and in the supply of waste; while the motion itself, or the production of force, appears in the shape of waste of matter. Now in the young animal the waste is less than the increase, and this condition does not cease in the female with complete developement, as in the male; and thus in her, vegetative life is more intense than nervous life. If nutrition is dependant on the blood, then those substances only can be regarded as food which are susceptible of conversion into blood.

To determine, therefore, what substances are nutritious, we must ascertain the composition of the food, and compare it with that of the ingredients of the blood. When blood is withdrawn from the circulation, it is well known that it separates into a yellowsih liquid, called the *serum* of the blood, and a gelatinous mass, which, when coagulating blood is briskly stirred, adheres to the rod. This is the *fibrine* of the blood, which is identical with muscular fibre, when this is purified from all foreign matters. The second principal ingredient resides in the serum, and possesses all the properties of white of eggs, and when heated coagulates into a white elastic mass, and is known as *albumen*. Chemical analysis has led to the remarkable result that fibrine and albumen contain the same organic elements, united in the same proportion. Their particles are arranged in a different order, as is shown by the difference of their external properties, but in their chemical composition, the ultimate arrangement of their organic elements, they are identical, and Denis has recently actually succeeded in converting fibrine into albumen. In the process of nutrition both albumen and fibrine are capable of conversion into muscular fibre, and muscular fibre into blood. No part of an organic mass which possesses life and motion is destitute of nitrogen; all of them also contain carbon and the elements of water, but the latter in no case in the proportion to form water. The chief ingredients of the blood contain nearly 17 per cent. of nitrogen. The animal body is incapable of producing an elementary body out of substances which do not contain it; it is obvious then that all kinds of food must contain a certain proportion of nitrogen, for this element is essential to the composition of the animal body, which is incapable of creating it, and no nitrogen is absorbed from the air in the vital process.

* For the developement of these views, see No. 30 of this volume, p. 465.

The simplest example of the nutritive process is seen in the carnivora, who live on the graminivora, whose flesh and blood are identical with their own. The food of graminivorous animals consists of vegetables, a large portion of which contain but little nitrogen. From what substances, then, is the blood, from whence their organs are developed, derived? Chemical research shows us that all the parts of vegetables, susceptible of affording nutriment to animals, are rich in nitrogen. These nitrogenized compounds are *vegetable albumen*, *vegetable fibrine*, and *vegetable caseine*, and are the true constituents of the food of graminivorous animals, and which contribute to the increase of the mass in their body. These three substances, contain the same organic elements, united in the same proportion by weight, and are moreover, identical in composition with the chief constituents of the blood—animal fibrine and albumen. By these discoveries how simple is the process of nutrition in animals. The vegetable principles, which in animals form the blood, contain its chief constituents ready formed, so far as regards composition. A certain quantity of iron, besides, exists in all plants, and this appears in the blood discs. By these principles the graminivora obtain in their food the identical principles, on the presence of which the nutrition of the carnivora depends.

Having thus seen the mode of growth in animals, an important problem remains to be solved—What is the function of those substances which contain no nitrogen, as starch, sugar, gum, pectine, &c.? The graminivora cannot live without these substances; and the nutrition of the young of carnivora is accomplished by similar means, for their developement is dependant on the supply of milk, which contains but one *nitrogenized* ingredient, *caseine*. But milk contains, besides, butter (fat) and sugar of milk, which are substances rich in carbon and the elements of water, and are indispensable to life. By means of these constituents the organism is protected from the action of the oxygen of the atmosphere; for the nitrogenized elements of the food contain exactly the amount of carbon requisite for the formation of fibrine and albumen, and this excess is expended in the production of animal heat. The bile, too, plays an important part in the elaboration of the carbon of the food, and on its peculiar use in the animal economy Dr. Liebig has constructed a very pretty theory. When graminivora and carnivora are deprived of exercise they consume more food than is requisite to reproduce the waste, and at the same time more carbon and hydrogen are introduced into the system than is necessary to support respiration and maintain the animal heat. Now want of exercise and diminished cooling are equivalent to a deficient supply of oxygen. There is, therefore, an excess of carbon and this manifests itself in the production of *fat*. This is an anormal condition, and depends on the disproportion of carbon in the food and of the oxygen absorbed by the lungs and skin. This excess of carbon is never seen in wild animals, nor in the Arab of the Desert; but prevails among the inmates of prisons, and the sedentary females of eastern climes, and in stall-fed animals. Its

formation depends on a deficiency of oxygen. When animals are fattened on food destitute of nitrogen, only certain parts of its structure increase in size. Compare the liver of an ordinarily fed goose, which is firm and elastic, to the soft, spongy organ of the imprisoned animal. The essential difference is in the greater or less deposition of fat in the cells, causing their expansion. In some diseases the starch, sugar, &c., of the food do not undergo the changes which enable them to assist in respiration, and consequently to be converted into fat. Thus in diabetes mellitus the starch is only converted into grape sugar, and is expelled from the body without further change. In inflammation of the liver the blood is loaded with fat and oil, and it is probable that some of the constituents of the bile are converted into fat. The nutritious elements of the food may be divided into two classes: the first is nitrogenized, and is susceptible of conversion into blood, and contains what may be called the *plastic elements of nutrition;* they are—vegetable fibrine, vegetable albumen, vegetable caseine, animal flesh, animal blood. The second class is *now nitrogenized* and is incapable of this transformation; it serves to support the process of respiration, and its contents may be called the elements of respiration; they are—fat, starch, gum, cane sugar, grape sugar, sugar of milk, pectine, barsorine, wine, beer, and spirits.

The second part of Professor Liebig's work is devoted to the consideration of the metamorphosis of the tissues. When animal albumen, fibrine and caseine, are dissolved in a moderately strong solution of caustic potash, and then exposed to a high temperature, decomposition occurs, and on the addition of acetic acid, a translucent, gelatinous precipitate occurs, of the same character and composition, from which ever of the thin substances it has been produced. This compound may be considered as the starting point of all the other animal tissues, and Mulder gave to it the name of *proteine*, (from $\pi\rho\omega\tau\varepsilon\upsilon\omega$, I take the first rank.) The blood is consequently a compound of proteine, with inorganic substances in variable proportions. All the organic nitrogenized constituents of the body, however different may be their composition, are derived from proteine. The development of the young animal from the egg of the fowl proves this.

A new office is given to the saliva by our author—the direct introduction of oxygen into the stomach. During mastication there is an increased secretion of saliva, and this possesses the property of enclosing air in the shape of froth in a greater degree than even soapsuds. In this manner the air reaches the stomach, when its oxygen enters into combination, and its nitrogen is exhaled through the skin and lungs. The longer the continuance of digestion, the more copious the secretion, and the larger the quantity of air which enters the stomach. The gelatinous tissue is not a compound of proteine; and animals fed exclusively with gelatine die, because the gelatinous tissues are incapable of conversion into blood. When mixed with other food it nourishes the gelatinous tissues, and thus diminishes materially the productive energy.

The supposed function of the bile is highly ingenious. It neither assists digestion, nor is it an excretion. It is the fuel which supplies the respiratory process, and assists in the production of animal heat.

The identity of *theine* and *caffeine*—the active principles of tea and coffee—has been recently established by chemistry. The action must consequently be similar on the system. Now they are both highly nitrogenized, and one ingredient of the bile, *taurine*, contains also a great deal of nitrogen; and Dr. Liebig believes that theine and caffeine are active in the production of this constituent. When there is a consumption of an excess of non-azotized food, or there is but little movement, then the use of tea and coffee may be beneficial, for a nitrogenized product is thus furnished. Tea would be injurious to the Indian, for the waste in him is already great enough, and to retard this transformation of matter he resorts to tobacco, and assists its action with brandy. Tobacco being antiseptic, it retards the digestive process; hence cigar smoking after dinner must impede digestion, and be generally injurious. Dr. Liebig's theory of the mode of action of the vegetable alkaloids is highly ingenious and plausible. The substance of the brain and nerves is produced from the elements of vegetable albumen, fibrine and caseine, either alone, or with the aid of non-azotized food, or the fat formed from it; and as the active principles of bark and opium may be converted into the constituents of the nervous matter, the most probable supposition of their action is, that they assist in forming new, or in transforming existing nervous matter.

The third and last part is devoted to the consideration of the phenomena of motion in the animal organism, and though eminently speculative, contains much which is highly interesting to the physician.

M. Clymer.

Case of Ununited Fracture of the Forearm of four years standing, successfully treated. By Charles S. Tripler, M. D., Surgeon U. S. Army.

In the September No. of the "Maryland Medical and Surgical Journal," this interesting case is reported at length. There had been fracture of both bones of the left forearm, the radius being "broken within two inches of its humeral extremity, and the ulna at one-third of its length from the elbow." The limb was useless, except in raising weights in the direction of its axis. The false joint of the ulna possessing most motion, it was supposed that if osseous union were effected in that bone, the arm might be useful for ordinary purposes. Forcible opposition was employed, and although the patient suffered a great deal, and frequently removed the apparatus, it was successful in eleven weeks. The mobility in the false joint of the radius was still so great as to demand an operation, and excision was resorted to, and was successful, in spite of several untoward accidents, in *six* weeks. M. C.

THE MEDICAL EXAMINER.

PHILADELPHIA, SEPTEMBER 24, 1842.

MISCELLANEOUS NOTICES.

University of Virginia. The Medical Faculty of the University of Virginia has recently sustained a loss by the death of Professor JOHN P. EMMET, who for a long period occupied the chair of Chemistry. The chairs of Medicine and of Anatomy and Physiology continue to be ably filled by Professors HENRY HOWARD and JAMES L. CABELL. By the catalogue for the current year, it appears that thirty-nine students attended the course of Medicine, and forty-two that of Anatomy and Surgery, at the last session.

Medical College of Missouri. The faculty of this institution is now organised as follows:—Daniel Brainard, M. D., Professor of Anatomy and Physiology; Josephus W. Hall, M. D., Professor of Theory and Practice of Medicine and Clinical Practice; H. Augustus Prout, M. D., Professor of Chemistry, Materia Medica and Medical Botany; James V. Prather, M. D., Professor of Surgery and of Surgical and Pathological Anatomy; Moses L. Linton, M. D., Professor of Obstetrics and Diseases of Women and Children.

New Haven Medical Association. The physicians of New Haven appear to enjoy a harmonious and agreeable intercourse. We learn from the published notice of their association, "that since its foundation, no physician of respectability has ever established himself in the city without becoming a member of the Association; and for a period of thirty-two years, but *two* of its members have *withdrawn* from its connection. The Association numbers at this time eighteen out of the twenty regular physicians in the city. It is confidently believed that, from the manner of organization of the Association, and the way of conducting its meetings, it conduces more to raise the standard of the profession to that grade to which it is entitled, than any similar Association in the country. It is probably owing to this fact, that the physicians of New Haven are on better terms with each other, than in any other city in the Union."

The articles of the constitution of the Association strike us as judicious. The "fee table" we should be glad to see, at least in one or two items, raised to a higher grade. The obstetric fee of five dollars, the gonorrhœa fee of five dollars, the syphilis fee of eight dollars ought to be increased.

ANALECTA.

Typhoid Fever in a Patient sixty-three years old. By ELISHA BARTLETT, M. D.—On Wednesday, the 24th of August, I was invited by Dr. Butterfield, of this city, to attend the examination of a female subject, sixty-three years old, who had died twenty-four hours previously under the care of Dr. Huntington. Dr. Huntington was unable to be present. Dr. Butterfield had seen but little of the patient; and from the very partial history, which we had then had of the symptoms, we supposed it most probable that the case had been one of disease of the brain. As the case is one of considerable interest, I shall report it in the order which, under the circumstances, we were obliged to pursue, in its investigation and diagnosis.

The organ first examined was the brain. We found, here, moderate venous congestion, and pretty abundant sub-arachnoid serous effusion. The ventricles, also, contained from half an ounce to an ounce each of clear, colourless serum. The colour and consistence of the brain were in no way obviously changed.

The adipose tissue upon the abdomen was from an inch and a half to two inches in thickness; and the omentum was very much loaded with fat. The large intestine was fully distended with flatus, and the small intestines moderately so. The kidneys were somewhat softened, perhaps, but in no way very obviously altered from their natural condition. As soon as the small intestines were exposed, I was struck with the very marked, dark-coloured appearance of several of Peyer's glands, and with their very manifest thickening; and I remarked to Dr. Butterfield, that, unexpected as the discovery might be to us, we were likely, I thought, to find the lesion of typhoid fever. A portion of the lower part of the ileum, about seven feet in length, was removed from the body, slit open, washed, carefully examined, and notes of its condition taken at the time. Eighteen inches from the upper end of the removed portion we found a small oval patch very considerably thickened, with prominent edges, and its surface roughened and abraded. At the distance of two inches from this we found another and larger gland, more thickened than the first, and of a mottled red color. Then, at intervals of from two to fifteen inches, until arriving at within a foot of the ileo-cæcal valve, we found eight eliptical plates, several of them quite large, one of them two and a half inches long by one inch wide; more or less extensively diseased. Most of them were of a dark-red colour; they were much thickened, with prominent edges; some of them were extensively and deeply ulcerated, besides being the seat of the peculiar yellow deposition or degeneration so common in this lesion. The last ten or twelve inches of the intestine were thickly scattered over with smaller and somewhat more irregularly-shaped patches, in a condition similar to those which have just been described. This state of things terminated abruptly at the ileo-cæcal valve. Several of the isolated follicles of the ileum were red and thickened. The intervening mucous membrane was but little altered from its natural state. There were a few isolated follicles of the cœcum slightly prominent and reddened. The contents of the intestines were yellow and pultaceous. Several of the mesenteric glands, corresponding to the lower extremity of the ileum, were much enlarged, one of them to the size of the end of the thumb, softened, and of a reddish-yellow colour. The spleen was enlarged, dark and softened. The consistence of the liver, also, was very decidedly diminished. The upper portion of the alimentary tube was not examined.

The heart was softened, somewhat, though otherwise natural. There were no pleuritic adhesions, and the entire lungs were perfectly healthy, excepting that the lower and posterior edge of the right lung had undergone the kind of *carnification* common in typhoid fever. It was of a dark, bluish-red colour; wholly destitute of air; not granular or hepatized; with a tough flabby texture, not easily torn or penetrated by the fingers.

Here, then, was a case, so far as the evidence to be derived from the morbid appearances of the organs could settle the question, of typhoid fever; not doubtfully or vaguely, but, on the contrary, very clearly and unequivocally marked. It remained to be seen, whether, contrary to what we had been led to suppose, this diagnosis, founded exclusively upon the autopsy, would be justified by the history of the case during life. On inquiry of the friends of the patient, and of her physician (Dr. Huntington,) it was found that she was attacked on Monday, the 15th of August, after breakfast, with severe pain in the head; and that she complained of being very cold. She ate no dinner, but kept about during the day. Through the night she was dozy, but restless; and during the whole of the next day, she remained in bed, with increasing headache, and with pains over the whole body, but especially severe in the back and hips. She had no appetite, was thirsty, and inclined to sleep, though restless. This state of things continued through Tuesday night, with the addition of slight wandering delirium. On Thursday evening there was much increase of the somnolence, so that for some hours she could not be roused. From this period up to the fatal termination of the case, there was drowsiness, dizziness, restlessness, constant pulling at the bed-clothes, delirum; and marked rigidity of the muscles of both arms, constituting, as is now well known, an almost invariably fatal symptom in this disease. For the last few days there were four or five liquid discharges from the bowels daily, of a dark yellowish colour. The pulse was rapid, and during the last four or five days, irregular and intermittent. The tongue was nearly natural throughout the disease. Death took place about noon on Tuesday, the 23d of August, eight days from the commencement of the fever.

This patient had been residing, since the first of March, about seven miles from her usual home, in a neighborhood where typhoid fever had been somewhat prevalent during the summer. One of her own grandchildren was sick with the disease from the 8th to the 21st of June, in the house where she lived.

The principal interest of this case is connected with the age of the patient. It is now well settled that typhoid fever is, in a great majority of instances, a disease of early life. Of one hundred and thirty-eight cases, the histories of which are analyzed in Louis's Researches, only ten were over thirty years old, and no one was over forty. Of one hundred and forty-seven cases cited by Chomel, only six were over forty years old, and only one was over fifty. The last-mentioned observer says, in his Clinical Lectures on Typhoid Fever, published in 1834, that, so far as was then known, no case had been seen in which the patient was over fifty-five years of age. The alleged instances, reported by Andral, are none of them authentic cases of the disease. Of two hundred and ninety-one cases analysed in Dr. Jackson's report, only sixteen were thirty-five years old or upwards. The extreme age is not mentioned. In a memoir by Gendron upon this disease in one of the French provinces, three cases are mentioned in which the patients were between fifty and sixty years old; and four in which they were between sixty and seventy-five years of age. I have ventured to make the

suggestion, in a work upon this disease and upon typhus fever, now in the press, that typhoid fever may be found to occur more frequently after the fortieth year of life in the country, than in large towns and cities. This question can be settled only by the careful observations of the future; and be it as it may, I have thought it worth while to place on record the present *authentic and unequivocal example of typhoid fever, or dothinenteritis, occurring in the country, in a patient passed the sixty-third year of life.—Boston Med. and Surg. Journ.*, Sept. 7, 1842.

[We agree with Dr. Bartlett that persons advanced in life are more apt to be attacked with typhoid fever in the country than in town. The only patient, more than forty years of age, whom we remember seeing, was a gentleman fifty-four years of age, who was taken with the fever in the month of March, in a local epidemic which prevailed a few miles west of this city. In that epidemic, by far the larger number of patients were young people.

The fact of the disease prevailing as an epidemic is one cause, however, why it extends itself to persons advanced in life. In the city of Boston, in the epidemic of 1833, we were informed by an eminent physician that persons much advanced in life were taken with the fever. We do not, however, remember to have heard of a case in which the age of the patient was as great as in the instance reported by Dr. Bartlett. In typhus it is well known that the contrary rule holds good.—W. W. G.]

Rhubarb as an Application to Ulcerated Surfaces.—Dr. Alfred Markwick writes to the Editor of the London Medical Gazette that, while externe at the Male Venereal Hospital, Paris, under the justly celebrated and much lamented M. Cullerier, who died some few months since of acute hepatitis, a patient was placed under his care, who had already been an inmate of the hospital upwards of two months, for severe and extensive ulceration of the abdomen, occupying the whole of its right side and greater part of its left. The right wrist was also much affected. He had unfortunately inoculated it from the abdomen. Almost every plan of treatment had been adopted; even the actual cautery had been applied three times, but without producing any arrest to the progress of the sloughing. At the time I entered the hospital (says Dr. M.) he was much emaciated; his face was expressive of great suffering and despair; he had no appetite; his spirits were very bad, so that he would sometimes cry like a child; and he passed restless nights. The application that was then used was a combination of bark and camphor, which was sprinkled lightly over the parts. I continued this for rather more than two months, and he took at the same time sarsaparilla, and iodide of mercury; but he derived no benefit: indeed he became still more emaciated, and he had a perfectly sanguineous appearance. I then suggested to M. Cullerier the employment of the powdered rhubarb. To this he readily consented; and the following morning it was applied, but only in very small quantity, on account of the violent irritation it produced. Over this was placed some linen with holes cut in it about a quarter of an inch apart, (*linge troué*, as it is called by the French,) which was covered with charpie. On removing the dressings the following morning, a decided amelioration was perceptible. The wound had assumed a much more healthy character. M. Cullerier advised some camphor to be added to the rhubarb, in order, if possible, to mitigate

the pain occasioned by the application. This was done; but it had not the desired effect. The powder was then only applied every other day for about six weeks, when the ulcers had nearly healed. His appetite, spirits, and appearance daily improved, and in about a fortnight afterwards he was able to leave the hospital quite recovered. This patient had remained in the hospital four months without obtaining any relief to his sufferings. Six weeks were sufficient to produce cicatrization of nearly the whole ulcerated surface with the rhubarb—a fact which I think sufficiently proves the efficacy of the drug in sloughing venereal ulcers.

The patient had no return of the disease when I saw him six months afterwards.

Case of Amputation of the Leg, with some Observations on a New Mode of Amputating. By THOMAS GREEN, Surgeon to St. Peter's Hospital, and Lecturer on Surgery at the School of Medicine, Bristol.—James Allpass, aged thirty-four, a butcher, was admitted into St. Peter's Hospital, on Feb. 22, 1842, under the care of Mr. Green.

About four years ago the patient met with an accident, which caused a severe compound fracture of the right leg. After some time the bone united, not in a straight line, but obliquely, and there is now a considerable projection of bone at the seat of the fracture, around which the skin has been extensively ulcerated for some time. He has been repeatedly in the hospital; on each occasion the state of the ulceration was improved; but immediately on attempting to walk, it again degenerated into a state of foul extensive ulceration. On admission, the ulcer was found in a sloughing condition, with copious sanious discharge; the surrounding skin was of a fiery red colour, and the whole extremely painful; the limb is shortened, and he cannot bring the heel to the ground; tougue coated; pulse quick; complains of cough and loss of rest.

Finding that the leg was entirely useless, and that he had suffered in general health from the last extension of ulceration, he consented to the removal of the limb; but the operation was deferred until he was in a fit state to undergo it.

March 6th.—The cough has now ceased; tongue clean; pulse natural; he sleeps well; the ulceration is in an improved condition, and the skin healthy below the knee.

Mr. Green decided on performing the flap amputation, but in a different manner from that in which it is usually done. A transverse incision having been made across the front of the leg, through the skin, another was made through the integument at the back of the limb, including a large portion of the calf, and leaving skin enough to cover the flap of muscle, which was next formed by passing the catlin through the leg a short distance behind the bones, and cutting out in the usual way; the remaining muscles were divided by a transverse incision passing between the bones, which were next sawn through, and the arteries tied. Hæmorrhage still continued from a large vein, which it became necessary to secure by ligature. Three sutures and pieces of strapping were applied to keep the posterior flap in apposition. Cold cloths to be constantly applied to the stump, and to take immediately half a grain of acetate of morphia in a draught.

9th.—The patient has had no unfavourable symptoms whatever until this morning, when hæmorrhage came on from the stump, from which he lost a considerable quantity of blood; the tourniquet was immediately placed round the thigh, and secured, by which the bleeding was arrested. He states that

the limb has started occasionally during the night. His system shows the effects of loss of blood; his face and lips are pallid; feels faint and cold; pulse quick and small; tongue pale and tremulous. Cold water dressings to be constantly applied to the stump; to take at once half a grain of acetate of morphia; the tourniquet to be kept loosely over the femoral artery, and tightened immediately on the appearance of fresh hæmorrhage.

12.—There has been no further bleeding until this morning, when the stump bled again to some extent in a few minutes; the tourniquet was immediately tightened, and the hæmorrhage was stopped. Mr. Green having been sent for, directed the same means to be used; the man to be kept perfectly quiet, and closely watched. He stated that, on the return of any fresh hæmorrhage, he would apply a ligature round the femoral artery, considering it useless in the present stage of the wound to attempt to secure the bleeding vessel by opening the stump.

17th.—There has been no loss of blood since last report; a considerable portion of the wound on the fibular side has united.

April 6th.—The wound has entirely healed, except where one ligature hangs out; the others have come away. His general appearance is much improved.

20th.—The ligature only came away to-day, repeated gentle attempts having failed to bring it away previously; stump healed, and in good condition.

On the method of operating resorted to in this case, Mr. Green made the following remarks at the next surgical lecture at the Medical School:—

The mode of operating employed in this case I first tried a few months ago at St. Peter's Hospital, on a man named Morris, and found that by it all the inconveniences alluded to were avoided, for the man left the house with an exceedingly good stump, and now makes good use of his vocation as a sweeper of one of the crossings at Clifton. I shall now describe the operation as I performed it yesterday, and if you examine the limb removed, which lies on the table, you will easily understand its stages. An incision was made anteriorly across the fore past of the leg, in the usual situation, about two inches below the tuberosity of the tibia; it extended from the inner angle of that bone to a point behind the fibular; from the termination of this incision, on the inner side of the leg, the knife was carried downwards, to some extent, next across the limb posteriorily in a curved line, and brought up at the outer side, so as to unite with the front incision behind the fibula. In this manner a portion of the integument was divided, which might be correctly described as representing two-thirds of an oval figure. This incision should go through the skin and subjacent tissue, down to the fascia covering the muscles; the contraction of the integument itself, with a trifling assistance, by drawing the skin upwards, leaving a separation of about half an inch between the edges of the incision. A long catlin was now pushed through the leg, about one-third of an inch behind the bones, and carried downwards and next backwards, so as to make a flap of muscle, its edges corresponding with those of the retracted integument. The remaining muscles were next divided transversely; in this division are contained the large vessels and nerves, which are those cut transversely. The bones were separated, the sharp angle of the tibia was sawn off, and the arteries secured in the usual way. The flap, when brought up over the face of the stump, was entirely and abundantly covered by skin; three sutures were used, assisted by two broad pieces of strapping; a cloth wetted in cold water was applied over the stump, and the man removed.—*Lond. Med. Gaz., from Prov. Med. Journ.*